

RECORD





Hotel Sarnel ————— 1000

James Sarnel, top of Clinton
as far as explored on road side ^E 1125

became Allison beyond the highest
level of land in road. ————— 1175

top of highest part of
road ————— 1225

Dry Branch bridge road. ————— 1188 (198)

Dry Branch. Clinton in creek,
about 300 ft. west of bridge. ————— 1175 (185)

1. Dry Branch,

Clinton, 11 inches. Bluish with sal-
mon brown sinuoidal spots, varying

to strong tendency towards salmon
brown but not the even salmon

brown color at all. ^{light red with sal-}
^{mon brown specks}

Orthis elegantula, *Pachydiptycha* ^{thick} *branches*

Syellia, *Favosites Niagaraensis*

Ptychophylloids *spomen*, *Halysites*
catenulatus,

Dry Branch cont. —

Sarnel = 10 ft 6 in.

{ Sarnel with chert layers every 6-10 inches - 5 ft thick.
First marked chert layer is 5 ft 6 in above base.

{ Base of Quarried Sarnel. - 5 ft 6 in above Cl. top.
Lower Niagara etc. = 5 ft 6 in.

{ Mostly thin courses. There is no chert at
all. The lowest layers lie directly on the
Clinton, are quite hard, and a little like
what I have been accustomed to call
siltstone.

Clinton 11 inches.

{ See previous page.

Blue clay soft 20 in.

{ Limestone. Blue, sometimes varying
towards brown, contains *Orthis* alter-
nata, & *Orthis occidentalis*. These fossils
are found in salmon brown limestone, resembling
the Clinton but not in place) 4 in.

{ Soft clay and thin limestone 6 ft.
Blue limestone full of fossils. clay layers
intercalated. 20 ft.

Blue cherty clay = 4 ft.

Daly Adams top of hill — 1248 (center)
 2. Daly Adams Quarry.
 Base of Laurel rock which is greenish 4 feet.
 Snowflake rock in thick solid layers 10 ft 6 in.
 1140 Clinton salmon brown. 4 ft 4 in.
 Belfast bed. Medina, solid in layers. 2 ft.
 Blue shaly clay & mudstone below
 but also probably shaly 11 ft 6 in.
 Hard argillaceous limestone in
 shelly layers. several feet

3. Alutidum creek from John Bowers.
 Clinton 4 ft 4 in. between salmon
 brown and reddish, crinoidal.
 100 feet southward the Clinton is
 salmon brown good for upper 10 inches.
 The middle and lower part is fine
 grained not crinoidal reddish
 brown but full of Clinton fossils.
 It is only 3 feet thick, showing a
 rapid thinning in short distance

5 Down Valley (E) from Derbyshire Falls $\frac{3}{4}$ mile
 White Lake Niagara

Whitish thin Clinton below fine crinoidal.
 Clinton a basal Niagara? 1 ft 6 in. more
 Clinton 5 ft 3 in. red and reddish brown
 with thin layers of argillaceous rock, also
 lenses of the same.

6 At 2nd Falls. E of Derbyshire Falls,
 2 ft striping.
 4 gutter flag, street crossing, paving stone
 2 1/2
 6 in
 6 in Spotted calc. street crossing, limestone with
 chert nodules.
 4 in. curbing.
 6 in. curbing.
 6 in. curbing. Stone chiefly
 6 in. curbing. Used for 5 inch
 3 in. flagging. curbing.
 6 in. curbing. after dressing.
 6 in. curbing.

4 86 Derbyshire Falls

Sarsel bed base.

blue clay 20 inches

Iron fingered, Niagara, 7 ft 6 in to 7 ft 9 in

White Clinton or Lower Niagara, = 1 ft 3 in

Clinton 7 ft. 3 in.

Sample I. 3 ft 9 in, below Clinton base,

Sample II 10 ft. below Clinton base

contain more lime, at least

fossils.

Sample III. 12 ft below Clinton base

very even grained, fairly soft massive rock, weather back. About 2 feet of it.

Below are 5 feet of material similar to Sample II with plants fossils.

Next come about 5 ft of rock similar to III, which again is worn back under the more fossiliferous rock above. The gravel at the base of the Falls lies

10 feet lower down. or 32 ft below

Clinton = 39 ft 3 in. below Clinton top

= 4 ft below trans. rock top. = 48 ft 6 in

below clay bed at base of Sarsel bed.

7.

Harry Manly's Quarry. N. of James Ch.

(On S. side of creek there is fully 10 feet of gudgeon over the most common hard with many chert layers)

Shipping 12 ft clay and a little rock.

5 in. A flag or curbing cheap, yellow

2 in.

2 1/2 in. chert,

3 in.

4 in.

3 1/2 in.

3 1/2 in. with chert in bottom part

6 in layer with chert or nodules in top

4 1/2 in. flag or curbing good,

4 1/2 in. spotted soft ditch stone & gutter flag

3 in. flagging.

6 in curbing

2-2 1/2 in light cellar flag

8 in used for 6 in. curbing

7-9 in. used for curbing steps or lls

7-9 in. used for curbing steps or lls.

1 ft of soft base clay. (crap clay)

30 ft 22 in of the clay is material like that below but never gravelled

3 ft 6 in. thin layers of soft limestone, low. N. Y.

3 ft 8 in. Clinton, salmon brown above.

reddish below.

4 ft + of soft blue clayey material with a hard 6 in layer in the 4 in of the top

little anything they can do with it.

8) A. H. Clouds Quarry.
4 feet stripping.

7 in. Street crossing & foundation footings
butts.

2 in.

6 in.

3 in.

3 in.

3 1/2 in.

2 1/2 in. chert

4 in. for flagging street crossings.

2 1/2 in. cherty } sometimes street crossings
2 1/2 in. cherty } sometimes street crossings

3 1/2 cherty } sometimes street crossings
4 1/2 } together }

4 1/2 - 5 in. crossing gutters.

5 in. with cherty sometimes foundation
7 in. } together } for heavy building

2 in. chert

4 in. street crossings gutters

5 in.

4 in.

5 in. } often } for
5 in. } together } special walls

5 in. first cut ledge making

3 in. stepped ledge gutters

4 in. } often } steps & walls
6 in. } together } building heavy building

2 in. layer for glass covers light flays
6 in. for curbing gutters and
4 in. } curbing no chert
8 in. } often together
5 in. for curbing no chert
1 ft. soft blue clay & gravel

9) a.w. Clouds. Ed Clouds 305 feet
at west end of D. Schrist's quarry

Callispora frondosa

Halysites catenulatus

Clinton 30 in. about, possibly 36

total thickness not well shown

Probably not all exposed

10) D.L. Schrist

4 ft striping

2 in. chert

3 in

4 in

5 in

3 1/2

3 1/2

3 in

4 in

3 in

6 in spotted calc

2 1/2 in

2 1/2 in ragged layers

8 in sometimes 6 in = two layers, etc.

3 1/2 in

4 in bottom ledge

4 in

6 in

5 in

6 in

5 in

6 in

5 in

6 in

5 in

6 in

5 in

The stone is general

& rather brown

& not white

Will from these

factures in

11) Clinton about 1/4 mi. down stream
from Schrist's quarry

Clinton well shown, 48 in. thick

13) At head waters of stream near Crowell's
quarry.

Clinton 34 in.

Psychophyllum *ipomoea* several sp.
Syllia

Arthrus flabellus numerous foliations

Halysites catenulatus

Cyathophyllum *Daytonense*

Sower *Magara*

blue clay 4-5 in.

Clinton salmon brown 34 in.

About 4-5 in of solid dark blue rock.

Bluish soft clay. Greenish

The lower part of the Clinton has
a reddish color & contains rounded
fragments of *Syllia* of Clinton from
glauconitic siliceous rock, and of
a clay rock like upper part
rock.

12) Harrison
Cornell's Quarry.
Stripping 3 feet

2 in chert

2 in

2 in

3 in

3 in

2 1/2 - 3 1/2 in with chert nodules

2 in chert

4 in } often

3 in } together

4 in with chert nodules

2 in

3 1/2 in } spotted calc

3 in

6 in

2 in

6 in

4 in

2 in

5 in

5 in

2 1/2 in

6 in

1 in

clay

11 ft 6 in. Lower
Niagara.

Clinton look at
loc. (13.)

14.) 1/8 mile down stream from
Cornell's quarry.

Clinton 3 ft 6 in to 3 ft 10 in.

thick. salmon brown. reddish
at base.

Lower Niagara, diab. directed along

D. S. Secrest.

Stripping 7-10 feet.

6 in brown

6 in brown

3 in chert

3 in chert

8 in gutter, culvert covering covering.

6 in gutter, crossing a little chert

7 in spotted calc, a little chert.

5 1/2 in curbing.

3 in flag.

6 in curbing.

4 in curbing.

2 in flagging.

15 in, usually ^{two} curbing.

5 in together.

Lower
Niagara 8 in curbing.
6 in curb.

7 in. curbing
 20 in. blue clay soft
 4 ft. 6 in. Same clay
 2 ft 2 in. Clinton. salmon brown

16) Currier's Quarry.

6 feet shipping.

4 in chert

3 in.

2 in.

3 in.

1 chert

3 in.

2

2

2 in chert

2 in

5 in.

5 in.

5 in.

3 in.

3 in

4 in

open to the
 coll.
 right { 6 in
 2 in chert

{ 6 in. spotted

4 in.

2 in.

6 in.

5 in.

4 in.

6 in.

4 in

5 in

3 in from lower quarry
 6 in. post.

16) Clinton 6 ft 6 in.

Upper part salmon brown

Lower part reddish.

By all specimens of *Phyllopora*

Phyllopora small branched.

17) D. S. Sevier 2. of road.

Blue clay 20 in.

Same quarry rock, total 6 ft 6 in.

7 in.

6 in.

15 in

11 } often found together

9 }

5 } 26 ft. comes out together

3

3

3

3

4 in chert.

Not any levels - this is the
 only one at this time
 This is the *Phyllopora* series.

18. Deis, John, south of house
Clinton from 12-16 inches,
are shown but this evidently is
not the total, see next 19 loc.
see also 25 loc

19. NW of John Deis, 32 in. of Clinton,
or 2 ft 8 in. reddish or pink color.
Not salmon brown,

Underlaid by 4 in. Cin. blue limestone
in the Ouths occidentalis &c.

Favosites venustus

" *Nagaceras*

Cyathophyllum Daytonense

20. John Deis, a short distance
up stream the Clinton is only
22 inches thick. This is the upper
locality.

21. Reiboldts Falls also called
Reiboldts' Cave.

22) Just lower Niagara
Soft clayey material 1 foot
Clinton 7 ft 2 in. Salmon color
at top and light red or pink below.
Blue clay below. about 5 ft thick
Fossiliferous limestone 8 ft. about
Blue clay 2 ft.
Fossiliferous limestone, 4 ft.
Blue clay 2 feet exposed. The
total thickness probably 5-7 feet

Halyzites costumulatus.

28

35

33

6

12

4

18

12

18

12

5

32

211

12) 211 (178
12
91
84
7

- 23) William Senior.
Rhinidina verrucosa
Artis, calligramma
Artis bipartita
Stroph. hammonensis
Pachydictya bipartita
Stroph. patenta
Maen. antiquus

salmon brown above, lighter below.
 Clinton 60 in or 5 ft.
 2 in, white limest, lower Silurian.
 6 in. Deep blue limest. with fossils.

6	14
16	15
9	54
18	46
12	14
7	11
12	
9	
12	
9	
11	
5	
14	
6	
21	99
6	96
14	
12) 339	(28 1/4 ft.)
24	

24) Senior's Quarry

- 5 ft. shuffling.
 4 in.
 4 in.
 4 in much flint.
 3 in.
 8 in.
 2 1/2 in.
 5 in with chert.
 4 1/2 in.
 7 in spotted calc.
 5 in corbiny
 2 in flagging
 8 in. corbiny.
 1 in.
 6 in. corbiny.
 3 in. } underground } not with
 7 in. } " " } much.
 Bed of clay possibly 1 1/2 ft.
 Lower Quarry 7 1/2 to 8 ft.
 Clinton 3 ft 2 in salmon brown
 above. more pink below.
 Blue clay "cement" 8 ft. Very even
 grain.

Syllidina
 Artis calligramma

45

- 25 Clinton with pebbles of a greenish fine grained clayey rock resembling the upper part of the Lower Silurian. But this stone also exists in thin layers and lenses in the Clinton itself showing that the pebbles and probably were derived from the Clinton rather than the Lower Silurian material. The pebbles were 3-4 inches long.

Quarries occur up the stream for half a mile on both sides.

(D. L.) Secrest John P.
Saurel

James H. Groves
Saurel
Clay.

J. M. Huston

26

~~Huston Quarry, Fayette Co.~~

~~Clinton 4 ft 6 in.
between salmon brown and bluish brown with reddish brown spots.~~

27.

~~Reddish siliceous Clinton 34 in.
with pebbles and lenses & layers of a bluish more fine grained rock. The Huston Quarry locality is intermediate between this siliceous red Clinton and the more adirondack Clinton of Saurel which is salmon brown above and reddish below. At the present locality (27) the Clinton is fine grained when siliceous and coarsely crinoidat when distinct by red and not siliceous.~~

28

~~Clinton 52 inches, same as last.
Blue clay hard, below 4 ft +~~

RR crossing over stream. $\frac{3}{4}$ mi. east of depot at Greensburg.
 2 feet of white sparkling stone looking like sandstone & evidently very crystalline, immediately overlies the Laurel bed without the intervention of the intermediate Waldron shale.
 Above the 2 feet of sandstone are 5 feet of limestone not in nice layers but in more lenticular masses. It is fine grained and apparently also gritty as though the sandstone below turned to limestone above. The upper stone is sometimes also white but usually it is more drab.

The 2 foot sandstone contains brachiopods. *Atrypa* Dev. + *Stroph.* Dev. + *Favosites* large.

The overlying beds contain small branching corals.

7 in caps into them ^{caps irregularly.} flagging. 103
 14 in. $\frac{5}{9}$ in. - curb. fine steps. veranda blocks.
 { 3 flag. curb.
 1 scale
 7. used for 5 in curb.
 17 in ledge. { 6 flag. for gutter.
 6 in curb. gutter or flag.
 9 in ledge. jail flag cellar flooring.
 4 in with flint on bottom. flag.
 9 in waste with flint.
 4 in flag.
 4 in flag.
 6 in for gutter flag. footing. with flint on bottom.
 6 in of waste with flint.
 6 in gutter flag.
 5 in flinty.
 2 in scrap flag.
 7 in $\frac{4}{3}$ ~~curb~~ flag. not good for curb.
 4 flag. curb.
 13 in. $\frac{4}{6}$ gutter or flag not good for curb.
 3 flag curb. good curb.
 5 regular flag & curb.
 9 hard $\frac{5}{4}$ flag. curb.
 4 in flag. of flawy nature \approx
 6 flawed. wiggly. \approx
 { 4 flag curb. gray
 6 gutter flag.
 21 in ledge { 4
 6 blue. = good 4 in curb.
 14 in $\frac{7}{7}$ freezes. blue.
 fire clay 16 in. / 16 in freezes. blue. Bottom

8. 1/2 in. 1/2 in.

J. J. Layton.

Top

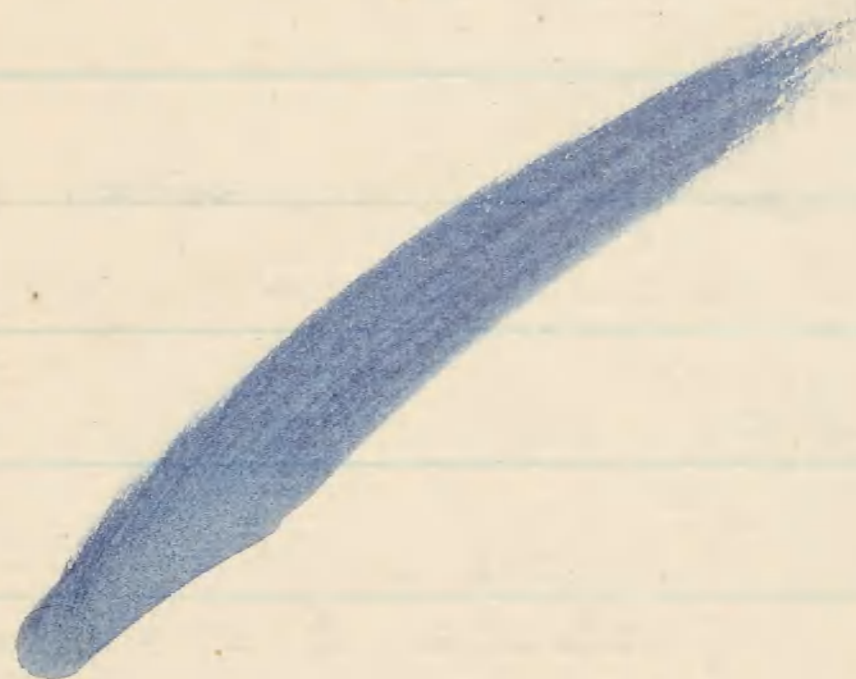
crushing

& therefore for use, used for

7 feet of limestone no good bedding

3½ carb.

11 Milk trough, water table steps
veranda blocks.



Mc Lee's Quarry,

dirt.

2 feet rough.

16 in. with flint on top. buff.

8 footing curb buff
8 footing curb buff

16 in. $\frac{8}{8}$ buff. bases of monuments.

4 feet. in a ledge. coarse poor bedding.
16 in iron ledge. usually not even bedded.
7 in. rubble.

monument base. piec blocks.

17 milk tough drab blue rock. bridge.
argillaceous.

9 in. curb. flag. corners.

12 in. $\frac{6}{6}$ curbs. good flag - window sills.

3 shells.

footings - flages.

18 in. $\frac{9}{9}$ steps. window sills door sills.

4 curbs all three may be worked
7 in. curb. as a two foot ledge bridge.
12 in. corner. water table bridge. steps.

4 in. curb or flag. } may be worked together.
7 in. curb. or flag }

14 in flint Not used at all.

12 in. flint. Not used at all.

6 in flint Black Diamond. almost worthless.

7 in. curb. or flag. 4 in. corners. sills. steps.

9 flint. 6 in. crossing. Indianapolis. Terre Haute

4 regular flag 3 in. curb.

11 in. $\frac{5}{7}$ curb. crossing. flagging.

6 regular. even. curb. principally flag.

14 hard. $\frac{4}{5}$ curb. flag. jail flag. window sills.
6 fraud six. good for flag. bridge backing

20 in. $\frac{9}{6}$ curb. steps. fine bench fence copying
jail work.

6 blue. curb or flag.

14 soft curb will not stand a freeze. $\frac{9}{6}$

12 soapstone

7 in. deep blue.

14 in. footing.

16 in.

6 in.

26 in. - would cap. twice

12 in.

4 foot solid no sign of a cap.

Will not
stand
a freeze

3 ft. run.

Mc Lee's Quarry.

S. C. Kearr.

14 soft.

12 soapstone
7 in

Sam Hollinsbee Westport.
 Miles Sample Westport ^{and Creek Co.}

Westport
 1 Westport Limestone Company
 Sam A Hollinsbee, Prop.
 2 Hollinsbee Stone Co.
 Ira J. Hollinsbee, ^{Super.} ~~Manager~~
 3 Sand Creek Limestone Co.
 M. H. Sample Pres.
 A. H. Stout Sec.

4 A. A. Mc Ell Quarry.

1 Geo. Munis Quarry

2. Bricourt & Bros.

Greensburg Limestone
 Samuel B. ^{G.}ward.

Bookkeeper & Treasurer.

1 John J. Putnam, Prop.

2 Big Four Quarries.

2 Eureka Quarries at Newport.

St. Paul.

1 Harry Adams Indianapolis.
 Builders Exchange.

2. John Scanlon Quarry.
 Cincinnati.

Scanlon & Hinsdale.

Partners in quarry.

Samuel.

~~Samuel~~
 Cox at Holt m need to
 do a big business.

Geo. Ashman need to do a
 big business. ^{at work} Ozroel

W. F. Robbins at Letts Cor-
 ner need to do a big business.
 about 4 mi. S. of Greensburg
 quarries about 1/4 mi. below
 Layton's quarry.

Westport.

Westport limestone Co.

H. J. Freston, Superintendent.

(x iron ledge place)
(12} eroded away.)47 No iron ledge struck,
52 ft. dist.

50 6 in. curb & flagging.

16 in. 5/11 curb
11 footings, light bridge stone,
sills, caps &c.

9 step ledge, very fine, steps.

18 in. 9/9 footings & bridge stone.

12 in. ledge, very fine, fine block stone.

7 in. flag ledge, no flint.

9 in. good stone, circular curb,

bottom of next lower ledge.

about 1/2 to 3/4 in. sticks on to

about 3 in of flint on bottom.

12 flint ledge, has flint at bottom

4/5 rough side walk.

9 in. a little flint on top.

12 in. flint ledge, footings.

circular curb.
9 hard, good, flag, footings,
9 scrap flag ledge, crossings,11 in. 4/7 curb & flag, footings, mostly for,
5 blue, curb, flag, smooth, bridge stone.14 in. hard, 4/6 curb & flags, 1/2 shells no good.
6 in. ft. curb. & flag.9 flag, curb, sills, caps,
21 6/6 steps, bridge stone when not capped,
side walks.6 in. blue, curb & flag, jail stone.
7/7 curb, flagging, bridge stone.

14 in. blue, stands we altering.

14 stone soap.

no account. Both Mr.
Freston.William H. Kepler. S end of Decatur
county. Walden shale with 2 feet
of buff limestone argillaceous above it
and a quartzitic & cherty layer above
with many corals especially the
smaller branching kind.

Northward

chale. de road. West of turn.
limestone with numerous
podot byzovans, especially

limestone with for-
pods.

limestone. fossils.

just described turn to a
limestone on going a short
distance eastward.

below the shaly
limestone the crinoidal lime-

stone (which may be) is found
in limestone with

immediately beneath
a buff color and is full of radi-

as, especially *Spirifera* & *Strophomena*.

In some places there
are crinoidal, and large

irregular masses of chert
on the levels. The total thick-

ness of these layers is about

very fine grained
bedding.

shaly. Further in the
more quarried this

forms three layers.
The fine bedding is still shown
the scales irregularly & shaly like.

6 in. of less finely stratified buff
laminous rock is found beneath.
The last three layers consist of
very few fossils.

13 in. of buff or blue argillaceous
with many fine horizontal cra-
filled with calcite.

12 in. argillaceous buff or blue limestone
with irregular calcite masses.

12 in. argillaceous limestone thin
with fine irregular cracks filled
calcite, also small calcite spe-

11 in. argillaceous limestone.

24 in. argillaceous limestone
calcite in irregular cracks in
specks.

The lower half of these argilla-
layers consists of somewhat better
stone than the upper half.

The irregular line of contact
between the fossiliferous limestone and
the closely stratified fine grained
rock below should be photographed.

Farther eastward the upper
feet of this series are seen to be
buff & argillaceous & poor
the lower 4 1/2 feet beneath
is of a whiter rock which in a

out in great massive blocks,
which are still practically un-
fossiliferous, a fine close bedding.
is however shown in capping the
rock.

12) $\frac{228}{108}$ (19 feet)

Below the quarried rock are
3 1/2 feet ++ of very closely banded
argillaceous limestone.

4-5 feet with corals. Devonian?
limestone.

very fine grained buff limestone
like that quarried at Geneva for
lime. Of course I do not know
whether it is the same or not.

32 in Below the quarried rock are 32 in
of closely banded rock

12 in rather massive running below
into rock with very conchoidal
fracture in which are poor re-
mains of many corals.

ack shale

31 feet below RR.

irridal layer

ish Teth &c

ement rock equivalent. brach.

19 ft.

~~North Vernon~~ limestone } not exposed

3 1/2 ft.

4-5 ft.

26 1/2 feet

argillaceous limestone

Dev. corals. Coniforms.

Fine grained buff limestone.

44	38.00	(9	5 1/4 8 1/2
	38.00		8 1/2
		52	9
44	40	(9	18
	33.00		2 1/2
		46.8	3 6 1/2
			40 1/2
			48 3/4
			50

corals

light brown above. darker below. massive
in massive slightly fossiliferous below. corals.
is of dark brown rock. more massive than
of rock which weathers back. brown.
Does down about to 4 1/2 layer at

out in great massive blocks which are still practically fossiliferous, a fine close banded layer shown in capping rock.

(12) $\frac{228}{108}$ (19) $\frac{195}{108}$

Below the quarried rock 3 1/2 feet ++ of very closely argillaceous limestone.

4-5 feet with corals. Dev. limestone.

Very fine grained buff lime like that quarried at Geneva lime. Of course I do not whether it is the same as y

9 1/2
12 1/2
2 1/2

32 in Below the quarried rock are : of closely banded rock

12 in rather massive running b into rock with very circular fracture in which are poor numerous, many corals.

Black shale

~~31 feet below RR.~~

4 ft Crinoidal layer

1 1/4 ft Fish Teeth &c

3 2/3 ft Cement rock equivalent. brach?

~~4 1/2 ft North Vernon fine rock~~ } not exposed

4 1/2 ft good North Vernon limestone

3 1/2 ft argillaceous limestone

4-5 ft Dev. corals Coniformes

Fine grained buff limestone.

44) 38.00 (9 5 1/4 8 1/2
386 8 1/2
9

42) 40 (9 5 1/2 18
396 468 2 1/2
5 1/2 3 6 1/2
40 48 3/4
50

corals

10 feet light brown above. darker below.

4 feet 6 in massive slightly fossiliferous below corals.

7 feet 2 in of dark brown rock. more massive than

2 feet of rock which weathers back. brown.

Drops down about to 4 1/2 layer at

118

rough stone used for rubble
curb & sidewalks.

4 1/2 ft 9 in. of weathering in carboniferous

11 (5) 5/4 curbs.

8 footing. same flint.

14 7/8 curbs. locally any flint.

10 5/5 curbs. both with flint esp. the

6 footing & rubble. side walk.

8 footing & rubble only. a little flint.

11 4/7 curb good

11 4/7 side walks.

11 4/7 curb gutter st me too cappy

5 curb. side walks

9 curb water table ashlar

8 curb water table. ashlar.

3 1/2 sidewalk flagging. 3 in curb.

9 curb. sills. water table all dressed work.

16 curb capped used for 12 in water table.

10 1/2 curb. all dressed work water table

shaly stuff

Alfred Ashman.

A. B. Ashman & Co.

South west corner 9th & John

Cincinnati

As good - Clinton is in a corner 16 ft - 4

North corner see book 119

max + page

2 ft 9 in at me weathering in carboniferous

6 in with Favosites, somewhat rounded

1 foot

4 in small coral fragments much rounded.

1 foot 6 in

1 foot with corals.

1 foot 6 in with corals at top

1 foot with corals numerous corals.

2 feet 8 in. with small corals at 1 ft 8 in line

7 ft 9 in of massive rock

fracture, lower half weathered back

4 1/2 feet bluish gray sandstone can be seen

various layers.

1 ft 11 in of sandstone below weathering back

3 feet 6 in of sandstone forming perfectly level

8 in. of sandstone in middle of block

14 in of sandstone in middle of block

5 ft 6 in of sandstone in middle of block

14 in of sandstone in middle of block

bottom

North Verm.
tp.

Black shale.

with *Oricoides*

1 ft 6 in? crinoidal limestone

2 ft fine grained blue limestone

brachiopods chert

some chert at several levels, with

4 ft limestone, crinoidal

8 in chert on top brachiopods,

trilobites, & some corals

1 foot with chert at top, plenty of brach.

An road east of Tunnel Mill

17 ft

8 feet of banded rock.

trilobites. *Spirifer* or *Der. Oricoides*

14 in with coral remains & some brachiopods

14 in with coral remains,

3 feet with numerous rounded coral fragments.

Top of Lower Silurian at
mill is 57° below level of Horace.

West port: S. Cor

12' densely crinoidal white rock.

14' Argill. clay soapstone.

15' Projecting ledge, a few crinoidal stems

4° 6' Limestone merging down into clay

3° 10' Madison like clay rock.

14' quite solid light brown rock. ^{Clinton}

level but not Clinton

Lower Silurian.

Top of quarry 6 in ledge is
28 1/4 feet above Lower
Silurian.

Top of quarry 6 in is 49 1/2 feet
and top of Lower Silurian is 77 3/4 ft
below Railroad level at
West port. To this add
about 1 ft in each case
making to R. level take
2 squares S of depot

6 in. curb or flagging good solid light gutt u.

4 in. solid. 4 in curb. 3 1/2 curb. two shells in bottom.

7 in. curb + flagging.

curb. crossing.

walk. jail flooring + ceiling

5 in. not much in. flagging side more durable than the limestone

21 in. $\left\{ \begin{array}{l} 1 1/2 \text{ shell} \\ 9 1/2 \text{ water table. range. pier caps.} \\ 6 \text{ curb + flagging mostly.} \\ 5 \text{ in} \end{array} \right.$

1 in shell.

not good for side walk. soft.

jail flooring. cellar flagging.

6 in blue six. side walk flagging pier blocks. blue.

good only for inside work.

will not do for outside work.

14 soft 7/8 8/6 curb. gutter. jail flag.

12-14-16 soapstone

B. Harris

bases piers bridge work.

16 in. milk to angl. fine for flint.

9 in. good for flagging. clean y.

18 in bridge bases.

Able to.

cap in use for range, water work pier blocks + after

17 in. 10/7 work together on bridge

12 in. coping pier block. pier cap.

9 in. range water table. good solids

8 in. 4 curb. no flint.

curb.

7 in. good solid. no flint. flagging

7/6 gutter + curb. a few spots of white flint.

13 in. bridge work.

5 in. curb or flagging. no flint.

leave flint.

caps in 8/12 varying. begins to

32 cheaper grade of stone. footings.

begin to have flint.

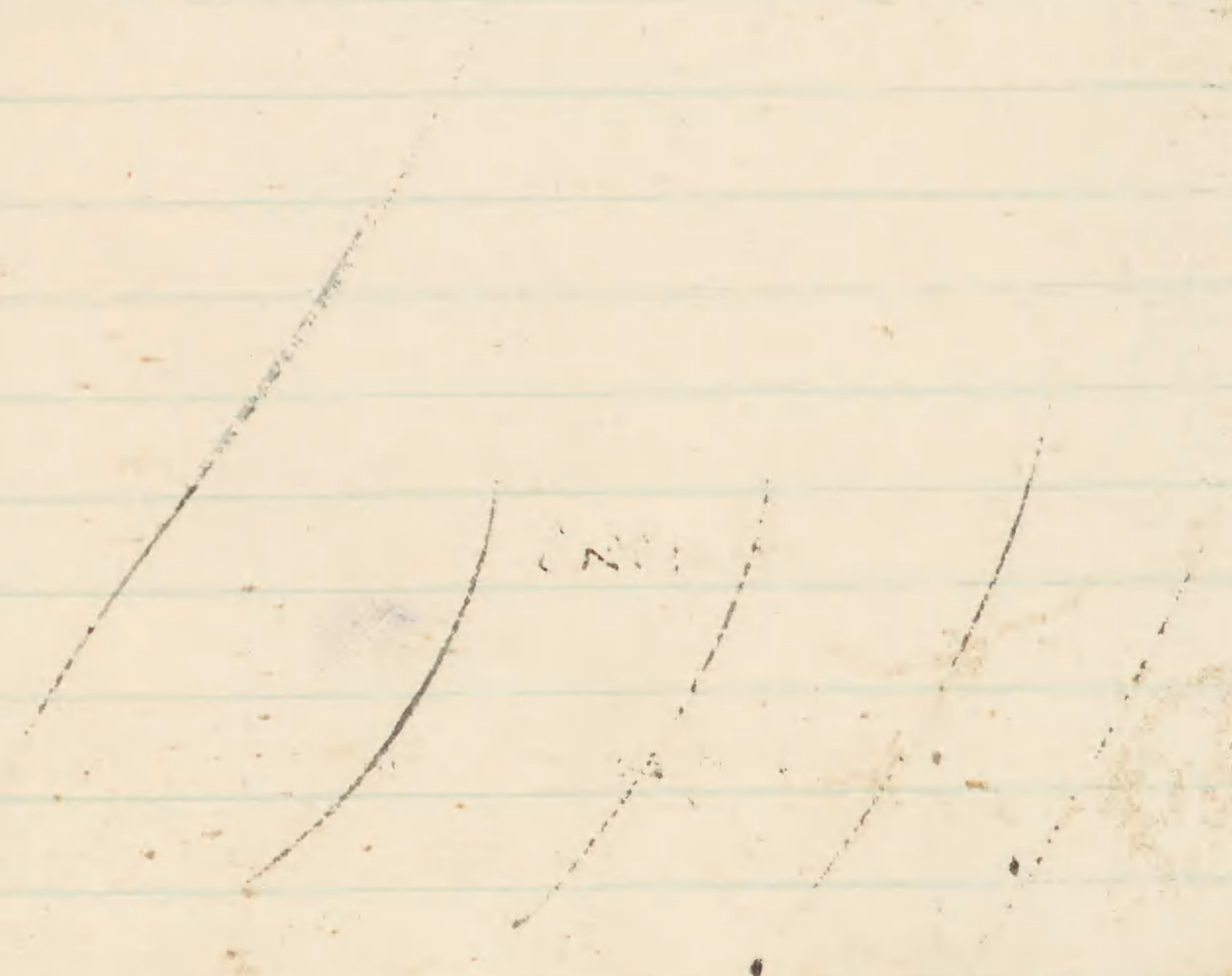
4 very good curb. often caps 7 not good for curb. good for flagging.

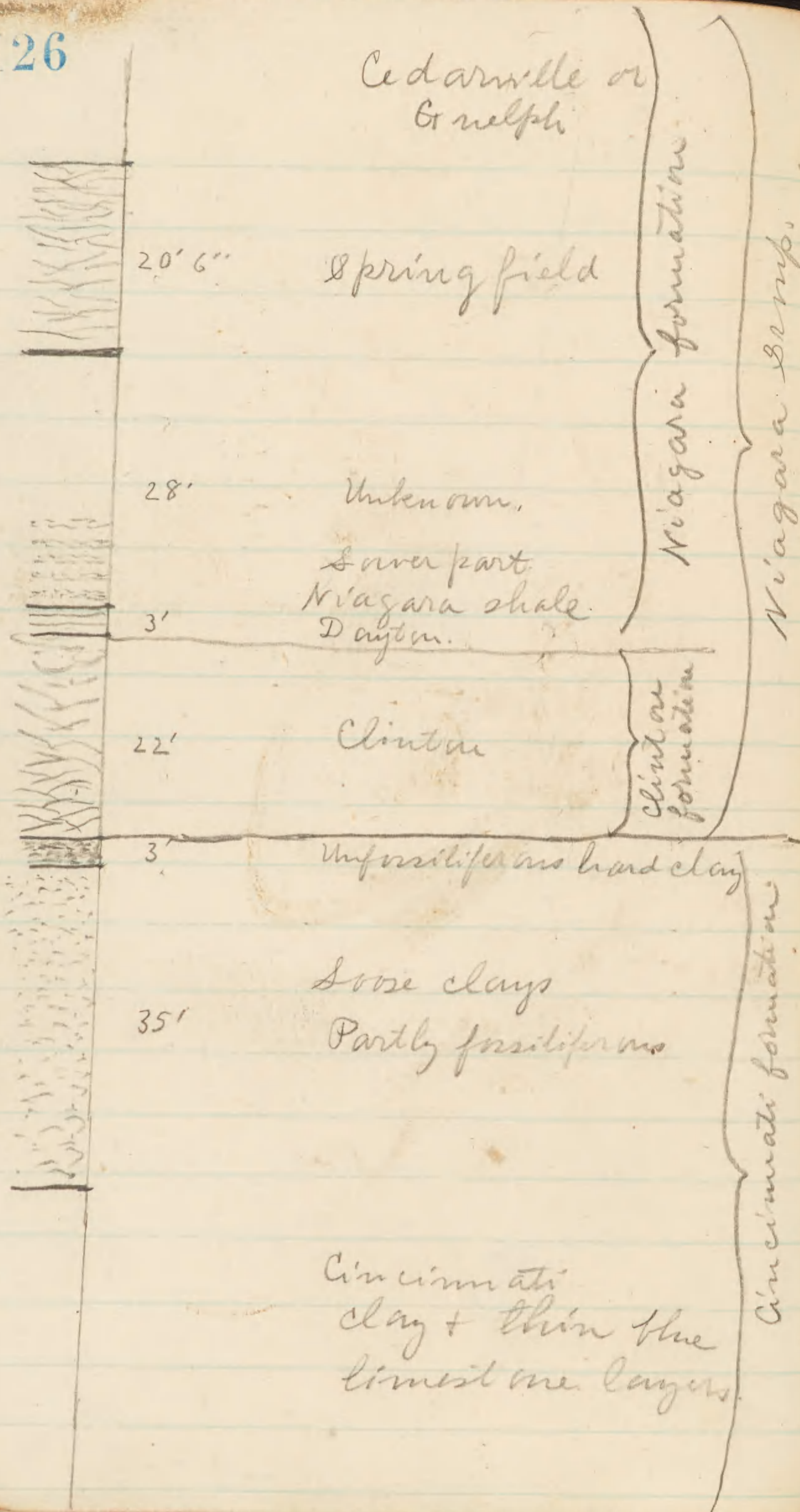
11 in. side walk flagging. crossing tower

~~Climax top 22' below
Dreenschlag. Sayburn's
Mpl. Two readings
alike.~~

~~Harris
iron ledges 3 1/2 nearly 4 foot
18 in. bridge. block stone base.
5 in ledge. flagging.~~

Fayton top, North of Beavertown
E side of road,





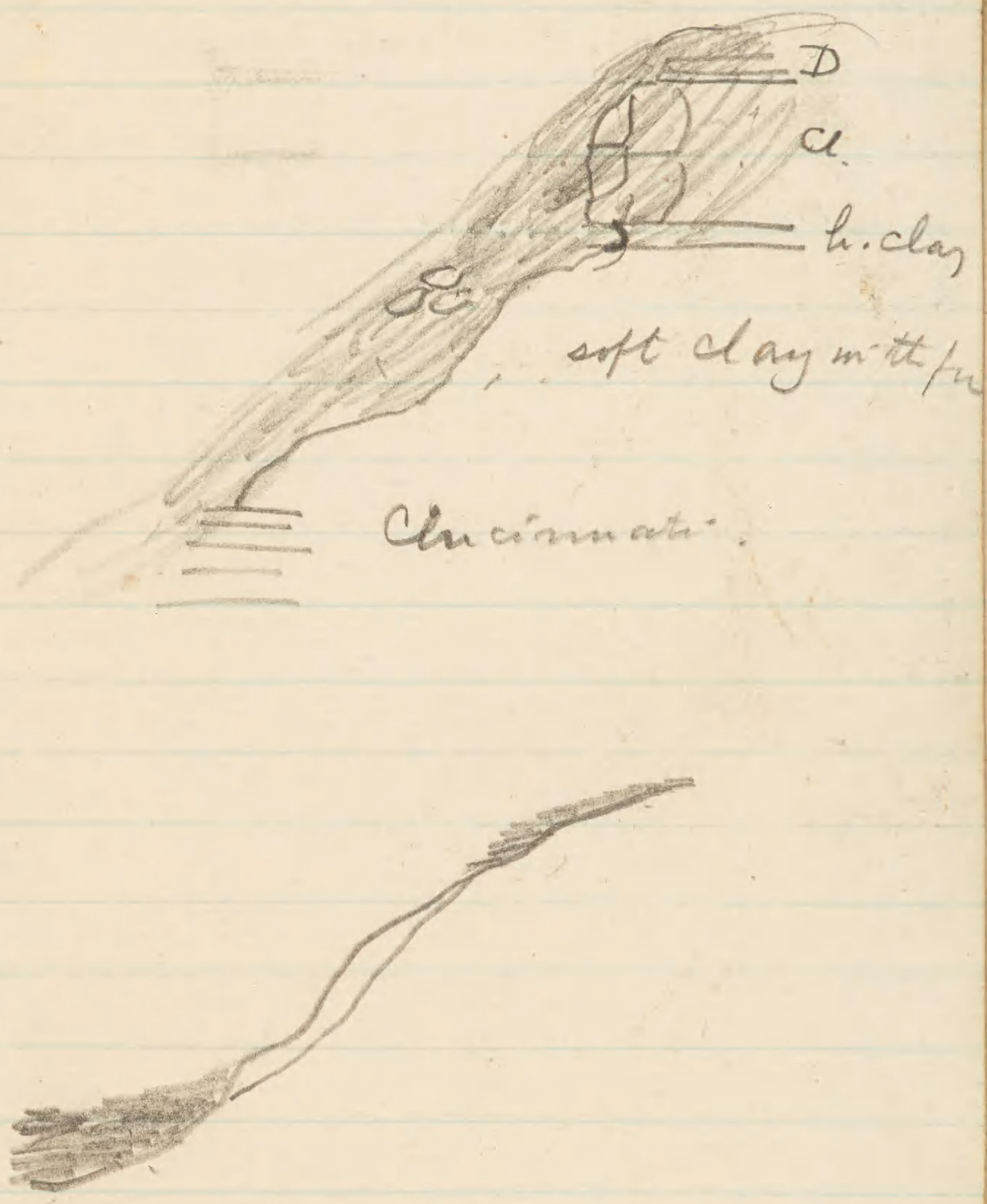
Upper Silurian
Lower Silurian

Lower Silurian Upper Silurian

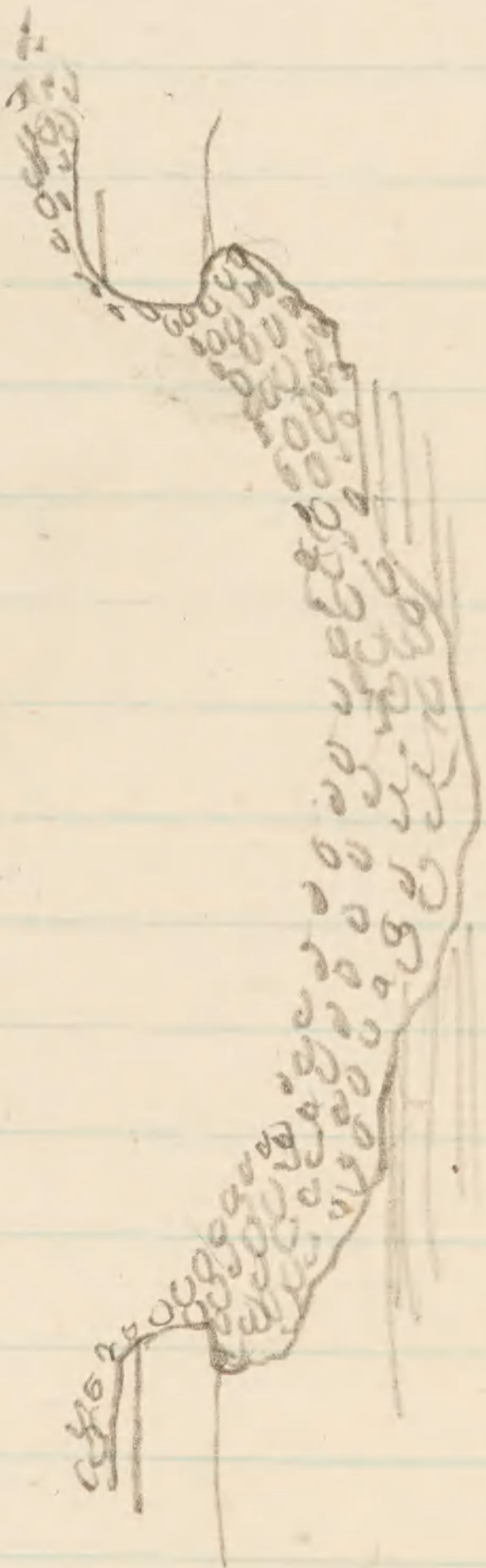
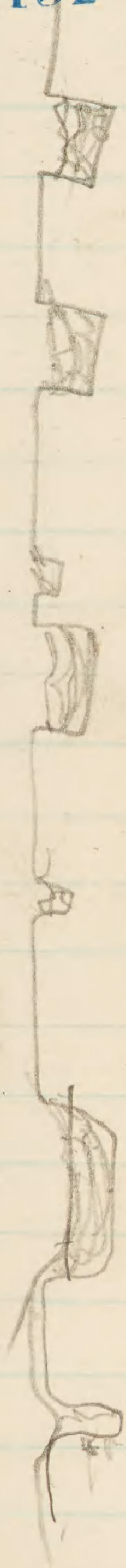
Sower. Helderberg
Hillsboro sandstone
West Union stone
Snellph Cedarville
Springfield
Niagara shale
Doughton
Clinton

Cincinnati
Dretnon
Black River
Chazy

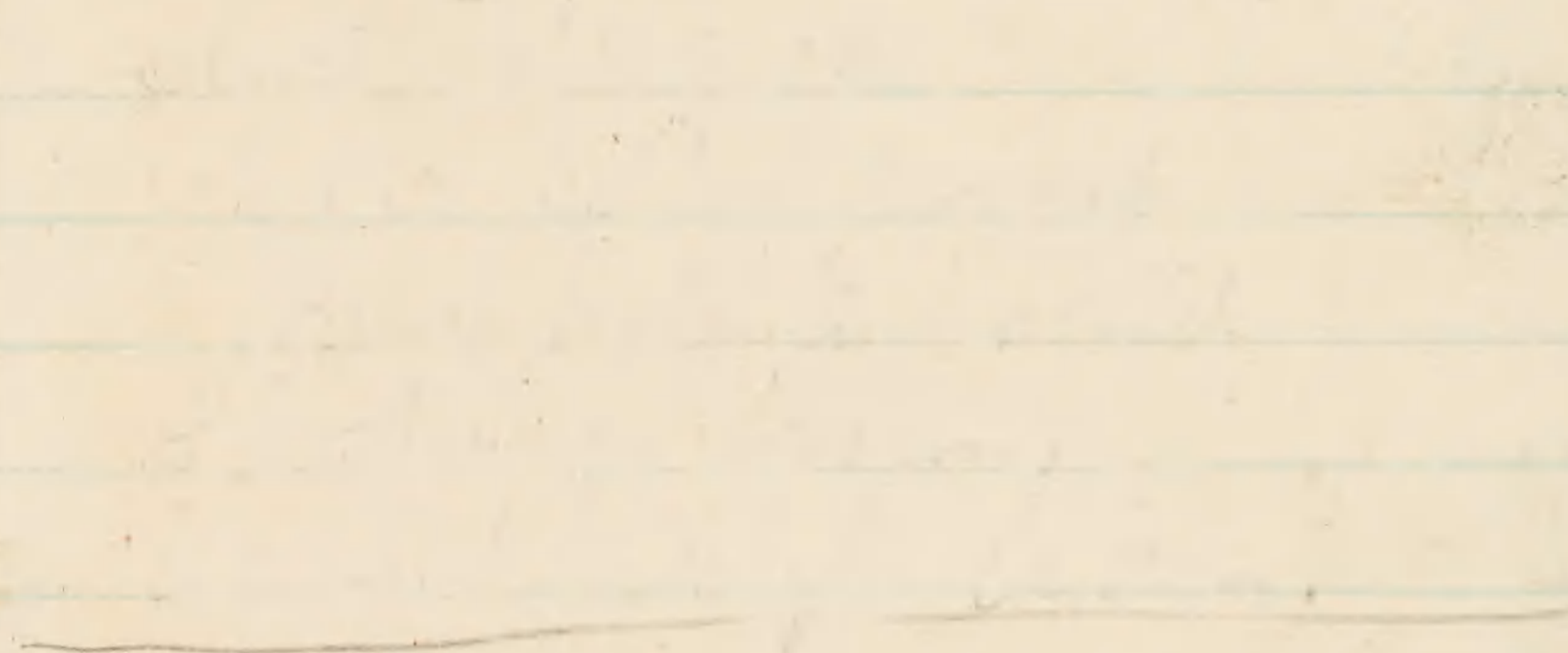
Carboniferous







Angel



I. 1 mi. south of St. Marys,
Top of LS. 945,

II. Top of LS. 938,

Lower Silurian

2 ft 8 in { Grey *Coniferus crinoides* 2 ft.
Dark brown *Coniferus* 8
Black shale,

12. Top of LS 920,

Black shale

12 in { Brown *Coniferus* with a
few crinoid fragments,
Columnal part near top
of LS,

Madison beds below,

13. Top of LS 912

Black shale.

No *Coniferus* in this layer
may have been introduced,
Clinton fragments only,

enough to suggest about 1-1½ feet
of Clinton of that much,
L.S.

14. Top of LS, 890

11½ Clinton

Coniferus 3 ft.,
Black shale

15. Top of LS 890

Clinton 6 feet certain
~~covered~~ 3 ft 2 in.

2 ft 6 in { grey *Coniferus crinoides* 22
dark brown *Coniferus* 8 in.
Black shale

3 ft Top of Lower Silurian here unlike Madison
rock below.

16 Top of LS, 887

Clinton 6 ft,

66 Lower Osgood shale 3 ft 6 in

5 ft 6 in { Dark brown *Con.* — 14
Crin. grey *Con.* — 52 in.
Black shale

- 17 Top of *Comiferus* 892
 Grey *comiferus* 18 in exposed
 Dark brown. Corn. 22 in.
 Black shale

- 101 5 ft 6 in at top of LS hard
 unlike the clayey Madison
 below.

Top of LS 875
 Highest Clinton seen 16 ft 6 in
 Not exposed 11 ft,
 Grey crinoidal *Comiferus*
 at least 15 in. overlaid
 by at least 12 in of dark
 brown rock.

Black shale.

None of the section above
 the last Clinton will be
 joined.

Hotel Ranzach 895
 gone up 15

863
20

18. Top of LS 840.
 Clinton 8 ft 4 in.
 Lower Osgood clay

19. Top of Osgood clay 868.
 Thickness of Osgood clay
 not known.
 Grey crinoidal Corn. 8 ft
 Dense limestone. Corn. 8 in.
 Black shale.

20. Top of LS 840
 Top of hard rock above Wash
 iron. About 1 ft thick.
 Clinton 7 ft.

- Lower Osgood clay (862)
 21 Upper Osgood clay 870
 Thickness of all Osgood about 47 feet
 Sanded limestone, 9 ft 2 in

Comiferus.

No *Comiferus* seen.
 Black shale.

7
 38
 29
 55 ft.

22. Osgood limestone 1 ft 8 in.
 Upper Osgood clay 1 ft 6 in.
 Laurel limestone 16 ft.
 Coniferous not recognized
 Black shale = Bottom = 890.

23. Osgood limestone 1-1 1/2 ft.
 Upper Osgood clay 2 ft 4 in.
 Laurel limestone 4 ft 8 in.
 No Coniferous
 Black Shale
 Bottom of Black shale 870.

24. Laurel limestone 7 ft 6 in.
 No Coniferous
 Top of Coniferous 875.

25. Laurel limestone 5 ft 6 in.
 Grey crinoidal Conif. 5 in.
 Black Shale.
 Bottom of Black Shale 865.

26. 18 in Osgood limestone
 14 in Upper Osgood shale
 7 ft Laurel limestone
 4 in. grey crinoid. Con.
 Black Shale,
 Bottom of Black Shale 855

27. Clinton 6 ft 2 in.
 Osgood shale 26 ft 6 in.
 Conif. grey sh. 20 in.

Top of Clinton 837.
 Coniferous about northward
 Present southward.
 Due to leaching away by
 percolating waters?
 Strong dip northwards
 5 ft 6 in in 49 steps.

- 805 Black Shale on
 28. Laurel limestone

29. Top of Osgood shale 810
 Laurel 20 ft

30. Bottom of Black Shale 835.
 ? Sand limestone.
 ? Base of Sand limestone 840.
31. Top of Sand limestone, just
 below Black shale. 853.
32. Bottom of Black Shale 863.
 Dark brown Corals, 8 in.
 Dry crinoid Corals, 2 ft, good, Corals etc.
 Top of Sand.
33. Base of Black shale 930.
 No Corals. identifiable.
 Base of Sand limestone 922.
 quite a distance north-
 ward. south slant.
 Top of Clinton 902.

- 800
34. Hard rock top of LS 6 ft 4 in.
 Base of Clinton 885.
 Clinton about 13 ft.
35. *Strophodonta striata*
Septacene rhomboides
 Clinton 14 ft certain.
 possibly 17 ft not certain.
 doubt comes in as to
 just where to separate
 the LS. Taking the
 lowest chert layer = 14 ft.
 base of Argood clay = rubble.
 Top of Clinton 904
 Top of Argood limestone 929
 Thickness of Arg. limestone 5 ft 6 in.
36. Base of Black shale. 940.
 on Sand limestone

37 Top of Black Shale 1020.
Nodule layer here,

38. Black Shale in a very fine
grained clayey rock at 932,
= About 15 in thick.

The Coniferous gray Crinoid
is about 4 ft thick,

39 Base of Black shale 1000.
Dark brown fine grained rock
about 2 feet.

Gray crinoid. Crin. Thick-
ness not seen. Only 1-2 feet
visible.

Sandstone beneath,

40. Top of Sandstone? 982 979.

8 ft. Sandstone
Crinoid layer
Osgood shale 2 feet
Osgood limestone 22 in,
Lower Osgood shale
Top of Black Shale 1030.

Short distance,

SE of Holy Cross Church,

41 Clinton thickness not known,
Lower Osgood clay 38 ft

See last section
for vert. Clinton cannot ex-
ceed 11 feet. May be much less.

42. Top of Columnaria layer
below Madison 990.

Top of heavy stone above
Madison 1008.

Clinton fragments above but
thickness not known

43 Top of Black Shale 1052

Dark brown rock 1 foot

Crinoid. Crinoid 8 in,
Clinton thickness 6 feet.

W. thin a few hundred feet
going with road it runs
out. The thinning out can
be readily traced.

Top of Madison. Thick beds
above Madison. 11 feet.

N. dip

44, Soutto 1075

15 Hard limestone above
 L. Sten 5 ft 6 in
 Clinton 6 ft 2 in
 Dark brown Clinton 1 ft.
 Black shale

14, At least 11 feet of hard
 rock at top of same Sil.
 Clinton 3-5 feet?
 Dark brown Coniferous
 string S dip.

16
 1296

16
 1296

1208 Columnaria level top 1170
 Limestone with fossils.

1205 Hard limestone layer.

1202 Light brown shaly Madison 10 ft.

1192 Dense hard limestone layer 1152

1190 Light brown shaly Madison

1175 Fossil layer nodules 1150

1174 Thin Madison shales 6 ft.

1168 Some fossils. 1151

1164 Limestone with fossils

11 Wedow Betty Wheatly in creek
 1 1/4 from cross road in base of hill

Columnariated

Light brown clay shale commonly
 = chert-streaked Madison

Hard banded Madison lime
 grey brown dirty 8 1/2 ft.

Shaly brown 5 ft.

Hard brown massive rock 10 ft.

base
 1202 Clinton? 4 ft 2 in,
 1 foot of rather basal Niagara?
 16 feet of Osgood like clay shale

top of Columbian west of
creek bottom 1240.

Therapsid Clinton base east
of creek ~~1240~~ is 70 feet
above Clinton base east
of creek.

2 Clinton 1260.

2 1/2 miles from 4 roads
1/2 mile E of Mc Outlets
at SE.

Strophomena patenter

Orthis flatella

Orthis elegantula

Pterinea brisa

Orthis bifurcata

3. Clinton 1262

Orthis flatella

Clinton 7 ft thick.

Some Argood clay, 4 1/2 ft.

Devonian Chert, weathered

until only the chert is left

4 Clinton 1218 Forks of roads

5 Clinton 1175, near Freder-
ic town

Fredericksburg

6. Same limestone 4 ft out all seen

Top of Waples Argood shale 2 ft 1121

Argood limestone 1 1/2 ft? ^{not} ^{well}

Some Argood shale 50 ft. ^{calcareous}

7 Top of Clinton 1076

Clinton 17 ft making road all

ance for base Niagara 2-3 ft.

9 ft 6 in rock massive LS?

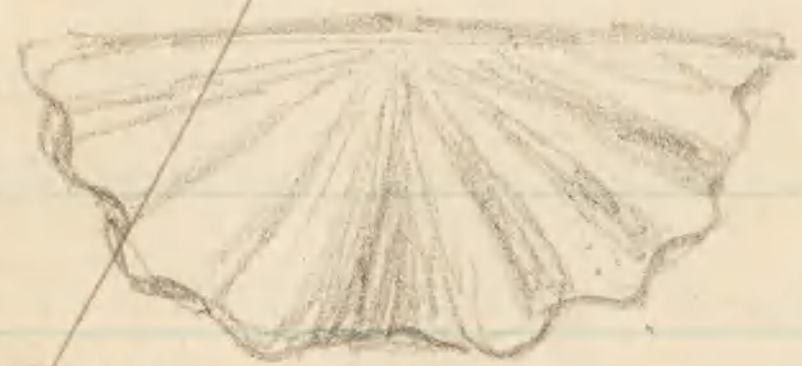
Tetradium bed in greenish clay
rock

- 8 ~~*Artus flatella*~~
~~*Artus elegantula*~~
~~*Columbina*~~
~~*B. cradida Medina?*~~
~~*Tetradium bed 3 feet*~~
~~*Satchia*~~
~~Hard rock at top of LS 12 feet~~
~~and also calcite~~
~~*Strophomena calycula*~~
~~*Trifurcata*~~
~~*Chonetes* 13 ft 10 in~~
~~*Halyxites crenulatus*~~
~~*Artus bifurcata*~~
~~*Cyathophyllum Dayenense*~~
~~*Strophomena calycula*~~
~~*Strophomena subnivalis*~~
~~*Strophomena concentrica*~~
~~4 in clay the base of layer 1120~~
~~2 in limestone~~
~~For a thickness of about 4 ft~~
~~clay and limestone inter-~~
~~bedded~~
~~Top of good upper shale 1150.~~
~~Sawell 1150. Total for all layers~~
~~36 ft.~~

- 9 1185 Still Niagara limestone.
 Not certain whether any
 Walden shale in this
 region. No proper exposures.
 10 1200 Coniferous?

- 11 1205 Top of Laurel Base of
 Walden Shale.
Atrypa reticularis

Strophomena nitida



Petelia evax,

12. *Calymene Niagaraensis* near top
 of Laurel limestone,

Tom Mann lives on
 B. W. Humphrey place just
 North of Lake Greenbrier St.

13. 1070. Base of Clinton
West of Bardsboro, east of
distillery

14. 1088 Base of Clinton -
West side of second creek valley,
west of Bardsboro.

15. Top of Clinton 1050

22 Section west of stream

As good clay lower.

Thin light colored layers at
various levels in lower 2-3 ft.

Thin clayey shales.

About 1 foot of clayey arch in
regular thin crinoids, un-
doubtedly strong calcareous
base 22 ft above Clinton.

2 ft upper Osgood clay

Calymene Virginiaensis at 33 ft

42 ft top of good sandstone
stone.

At 47 1/2 is a 1/2 foot good limestone
it is larger and above this
is Walden shale at 48 feet
Walden shale about 10 feet.

A very little Smithville, possibly
only 1-2 feet.

Cedar Creek.

Cedar Creek Mill.

B & Barnes.

5 miles W of Bardsboro.

7 1/2 miles E of Clinton.

16. 2 miles west of Cedar Creek.
Oolitic limestone with
Atrypa reticularis.

22 feet of limestone exposed sand
About 2 feet higher is oolitic limestone
2 feet of top of sandstone
is oolitic.

~~2 mi. West of~~

(2) 101
96

8

5 mi.

Calymene bicaudata
 Limnolites
 Dalmanella
 Encrinurus

17

At Silbshaine house,
 Base of Waldron shale 1043
 Waldron shale 12 ft. possibly 13
 Smirville Limestone 11 feet

4 1/2 mi. east of Boston

Atrypa reticularis narrow form.

Rhynchonella whiteana
Strophomena like *alternata*

18

1038 top of Laurel

3 1/2 miles E of Boston

19

13 ft. cert. in Smirville l.

5 ft more ~~possibly~~ certain

2 ft crinoidal grey con.

art. con. ? May be

more

38 in of dark brown

con. with white crin.

stems from

Black shale 1040

Andie Mobley 3 miles to

Boston

Total Devonian = 5 ft 6 in

Top brown.

variable Bottom grey

20

In Smirville Limestone

is found *Pentamerus* blunz

Halysites catenulatus coarse

1040 top of Dev. Coniferous

after rain

About 2 1/4 miles east of Boston

Chas. Blanton

1/8 mi. distance E of A house

21

a little south of the road

2 1/8 mi. among some cedar trees

E of east of gully east of Chas

Boston Blanton, Coniferous 8 feet

Top of Smirville Limestone

& base of Black Shale well

shown.

The white is found
 about 3/4 mile east of here

Boston 1000

Brown.

22 S with of creek Louisville
limestone. About 5-6 ft.
Coniferous. 1000. Black
Shale.

23. One mile east of Versailles
road. Colitic layer at top
of Laurel limestone. 2 feet thick,
983.

Waldron Shale 13 feet!

Smithville l. 13 feet!

Coniferous 5 feet!

Black Shale at 1012.

Dalmanites limulus

Spinifer crispus

Platystrophia wagneri

Atrypa reticularis

Arturoceras annulatum,

Rhynchonella thicklandi

in rock just below Waldron
shale.

West of Mrs. Edie Rogers,
West of the creek,
Rogers' Creek

24. Top of Laurel limestone,
1008. Colitic layer,
 $\frac{1}{2}$ mi. E of Mrs. Edie Rogers

25 Colitic layers at top of
Laurel limestone

26. Top of Clinton. 985
Thicklandia. Short distance
E of road come with house.

27. Top of Coniferous 1065
About $\frac{1}{2}$ mile E of 26.
Black Shale above.
Minimum thickness of Conifer-
ous - 3 feet.
Coniferous on upper Laurel.

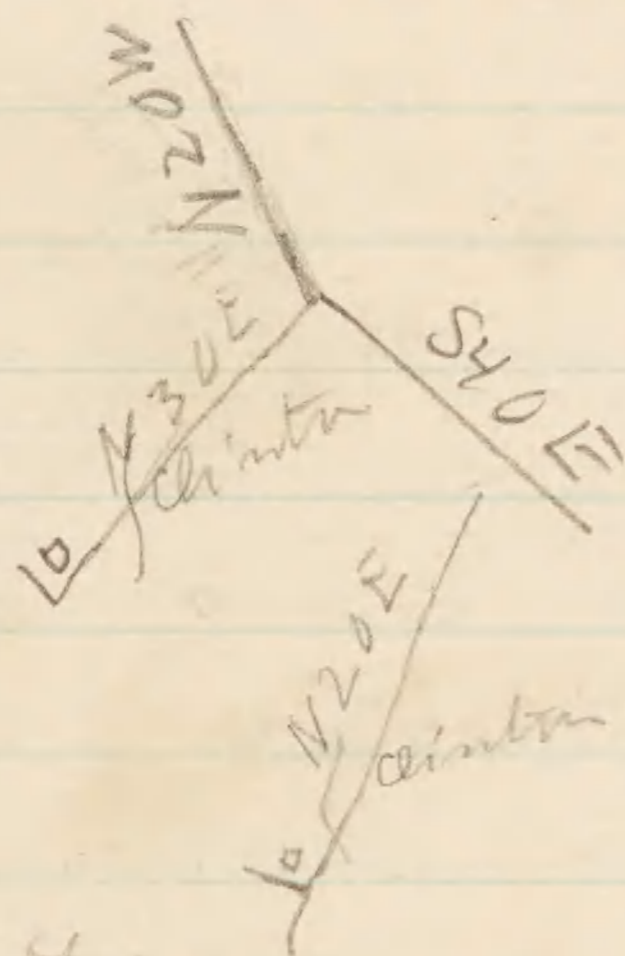
28. Hard irregular clayey rock -
Madison.

More regular than Silurian -
9 feet.

Clinton. 13 feet.

Some exposed 26, Coniferous on upper
Laurel

continued,

*Orthis elegantula**Orthis bifurcata*29. top of Cornif. base of
Black Shale 1110.

Bardston.

Within distillery.

Buffalo
Cedar

Sebanan to Calvary &c 157

1. Corniferous base 1008.
2. Fogel's hill 2 1/2 mi. S. of
Sebanan. Base of Black Shale
is at 1022.

Thin bedded Madison directly overlaid by corniferous. 10 feet at base sparingly cherty, and parts quite blue. 2 feet very cherty. 2 feet dark brown. Total 14 ft.

Rocks dipping so strongly southward that several hundred feet southward the Black Shale base level has fallen to 960.

The anticline is N of 2.
(870)

3. Light blue clayey Madison beds with Tetradium at 5 ft 6 in. Madison rocks up to 26 1/2 ft above Rolling Fork. Top of exposure at 878. Black Shale not seen N of river N of distillery the Black

shale descends to 870 and in
Silurian seen. Synclinal
N of river,

4^{W.} of Calvary center in stream bed,
Top of LS at 870. Coniferous
is 8 ft 4 in thick, overlaid
by black shale. Conif. rest
directly on the Madison.

5 RR cut at road crossing top
of LS 870. Coniferous &
Black Shale exposed in cut.

6 Two miles N of Rolling Fork
is a deep gully cut by stream.
Down the stream the base of black shale
is seen at 902. A Coniferous thick
8 ft? not measured. No L.S.

7 Continuing down stream
to the creek and going down
the creek, the creek runs for
a time on Black Shale
and then cuts through to the
Coniferous. Base of Black
Shale at 885.

8. Base of Black Shale 880
Cronoidal Coniferous 3 ft 4 in
Black Shale.

Coniferous rest on Madison

9. 857 - level between Black
Shale & lower Sub car-
boniferous.

10 Dam near New Market
860 Base of Black shale
resting on Coniferous.
Coniferous is 3 feet thick
and rests on Madison
direct.

Rocks dip west LS 6 feet
at dam 0 at west end of sec-
tion.

11 About a mile east of the
junction of Stewarts Creek
with Rolling Fork, the base
of the Black Shale is seen at
875.

12. An eighth of a mile down stream the *Coniferous* rests in the Madison at 848. The top 4 inches contain L.S. bryozoans. The rest is very Madison like. The *Coniferous* is 9 ft thick. Black Shale. The dip is quite strong southward, more than the local here green indicates.

13. Black Shale 900
Coniferous is only 10 ft. estimated.

Beudanticus imbricatus + *Columbina* in lower section below + below the *Coniferous* fossils.

The lower section dips more rapidly southward than the *Coniferous* or that at the next section to the SE

of the road (14) the *Columbina* zone bed is just below the *Coniferous* while farther southward it is 8 feet or more below the *Columbina* zone bed and at 12 it will be remembered the *Coniferous* is in the lower Madison.

15. Base of Black Shale 965
Coniferous. Thick.
Rests on lower Sil. ~~ap.~~
~~forming~~ the Madison beds.
 $\frac{1}{2}$ mi. west of pipe
Strong E dip of Madison
shown farther E on
W side of road.

9. 962 Base of Black Shale



